



MFG: ALLEN HERSCHELL  
NAME: SKY FIGHTER  
TYPE: KIDDIE

U.S. CONSUMER PRODUCT SAFETY COMMISSION  
WASHINGTON, D.C. 20207

**AMENDMENT TO THE APRIL 2, 1992 SAFETY NOTICE**

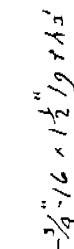
ATTENTION STATE AMUSEMENT RIDE SAFETY OFFICIALS  
SKYFIGHTER AMUSEMENT RIDE INSPECTION

JUNE 9, 1992

On April 2, 1992 the U.S. Consumer Product Safety Commission (CPSC) distributed a safety notice concerning the "Skyfighter" children's amusement ride. The ride's stabilizing arms may experience metal fatigue and shear off at the threaded ends. The attached tubs will fall to the ground and possibly result in serious injury to a rider.

The original notice indicated that the stabilizing rods were 1/2 inch in diameter and encouraged you to inspect known Skyfighters in your state. Since the manufacturer of the rides are no longer in business, it was difficult for us to obtain specific measurements or distribution information. We have recently been notified that the stabilizing rods were originally 3/4 inch in diameter and not 1/2 inch as previously suggested. We have received an original Allen Herschell drawing of the stabilizing rod and a copy is attached for reference. Please verify that the proper sized stabilizing rods are utilized with the Skyfighter rides to ensure adequate protection against wear and metal fatigue. If not, the bars should be replaced immediately. Again, all connections, sweeps, and areas prone to fatigue should be inspected, and parts replaced as necessary.

If you have any questions, please contact John Shumlansky at the Division of Corrective Actions, Consumer Product Safety Commission, Washington, D.C. 20207, telephone: (301) 504-0608; or by fax at (301) 504-0359.



ALLAN HERSCHELL CO., INC.  
NORTH TORAWANDA, N. Y.



U.S. CONSUMER PRODUCT SAFETY COMMISSION  
WASHINGTON, D.C. 20207

**IMPORTANT SAFETY NOTICE**

**ATTENTION STATE AMUSEMENT RIDE SAFETY OFFICIALS**

**SKYFIGHTER AMUSEMENT RIDE INSPECTION**

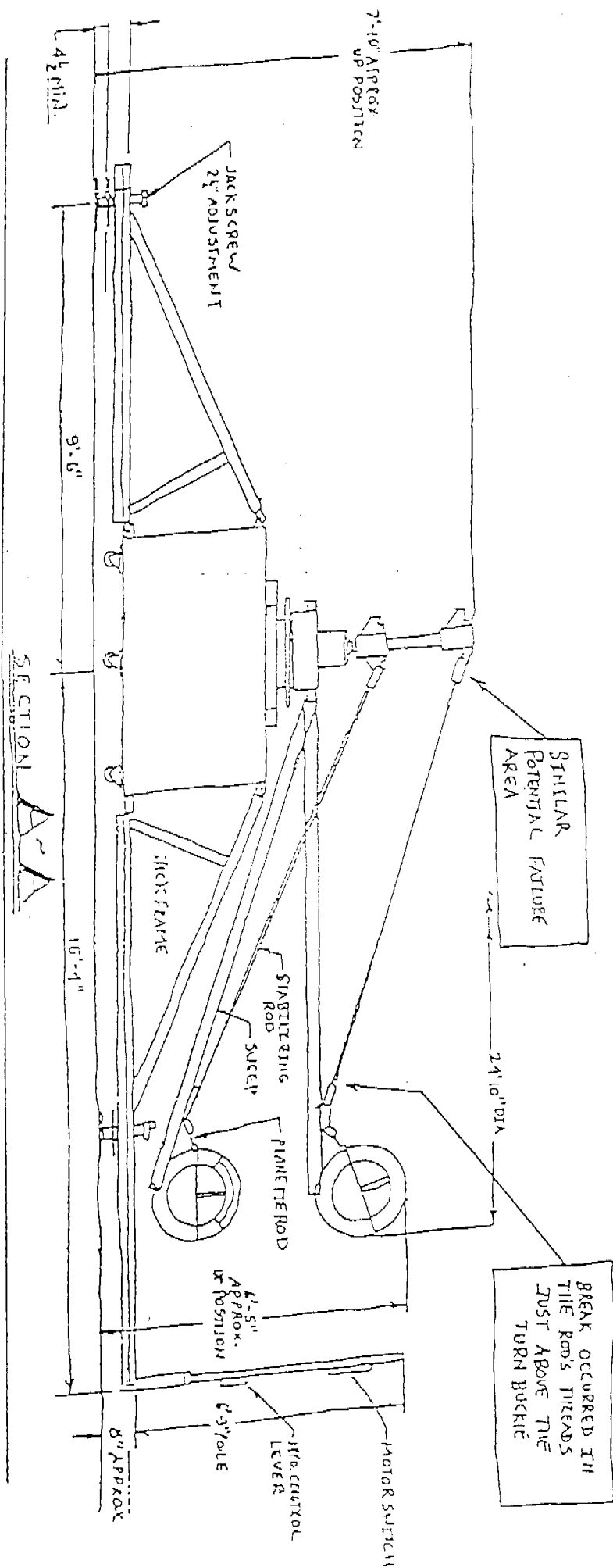
**APRIL 2, 1992**

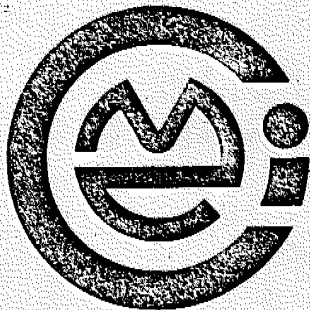
The U.S. Consumer Product Safety Commission (CPSC) received a report of an incident involving the "Skyfighter" children's amusement ride. The rides were manufactured by the now defunct Allan Herschell Company. Two children, ages two and three, were injured when a 1/2 inch diameter stabilizing rod snapped causing one of the attached airplanes to fall. The airplane with the two children fell four to five feet and slid along the ground until striking one of the metal ground feet. One of the children damaged four teeth and the other suffered mild contusions.

The Skyfighters were manufactured from 1949 through the early 1950's. While the number of Skyfighters manufactured is not known, there may be a number of rides still in use today. They were originally chain driven but may have been modified with an electric hydraulic system. We encourage you to conduct inspections of any known Skyfighters in your state to determine if the stabilizing arms are experiencing metal fatigue (see attached drawing). If so, the bars should be replaced immediately. Also, all connections, sweeps, and areas prone to fatigue should be inspected, and parts replaced as necessary.

Any information you can provide on previous state inspections of the Skyfighter rides, information on any related incidents, and names and addresses of owners of the rides would be appreciated. Information can be sent to John Shumlansky at the Division of Corrective Actions, Consumer Product Safety Commission, Washington, D.C. 20207; or by fax at (301) 504-0359. Questions can be directed to John or Marc Schoem on (301) 504-0608. We appreciate your assistance in this matter.

ALLAN HERSCHELL  
 "SKYFIGHTER"  
 AMUSEMENT RIDE





**ALLAN HERSCHELL**

**CHANCE**  
MANUFACTURING CO., INC.

Number: 7  
Date: 6-20-71

Supersedes:  
Number:  
Date: 5-1-66

## Service Information

**Ride:**

SKY FIGHTER RIDE - MODEL "C"  
(1953 and subsequent models)

**Subject:**

ERECTION

**REFERENCES:**

Blueprint KPC-101A Assembly Dwg.  
Blueprint KP-100P Parts Number Dwg.  
Blueprint KP-121A Hydraulic Circuit Dwg.  
Blueprint KT-101 Foundation Dwg.  
Blueprint - Electric Circuit Diagram

ERECTION OF SKY FIGHTER RIDE  
MODEL "C"  
(1953 and Subsequent Models)

1. Roll center drive assembly on planking onto location. Leveling not required.
2. (a) Assemble triangular jack frames at four corners by inserting two 3/4" pins at top and bottom of each corner and insert cotters. Do not screw up on jacks.  
(b) Assemble one stiff arm (6 ft. long, 1 1/2" pipe) to triangular jack frame and center drive frame, using two 3/4" pins and cotters.
3. (a) Assemble 8 sweeps, using 3/4" pins x 6" long. Assemble head end of pin at set screw side of yoke. Tighten Allen head set screw into pin.  
(b) Assemble 3/4" tie rods to sweeps with 3/4" clevis pins and cotters.
4. Assemble loading platform around outside of ride using taper pins and safety pin to lock in place. Add screw jacks at platform splice.
5. Adjust screws until frames are level. Raise until drive assembly casters are off planks.
6. Assemble planes to sweeps, use taper pins & safety pins. Add 3/8" tie rod to airplane & sweep using 3/8" clevis pins and cotters.

Factory and General Office, 4219 Irving, Box 2397 Wichita, Kansas 67201

Area Code (316) 942-7411

Sales Office:

103 Ross Ave., Dallas, Texas 75202

Area Code (214) 742-3802

7. Adjust main tie rods so that loaded cars have 2" to 3" clearance between sweeps and platform.
8. Insert light poles and tighten holding screws. Assemble switch panel to light pole.
9. Connect 16 make twist lock jumper cords from airplane to sweep and from sweep to rotating head.
10. Erect fence post using cotter pins - string chain in place. Outlet and inlet to ride can be located in any of eight places.
11. For shipping purposes, the cable which controls the hydraulic plunger valve is fastened to center drive assembly. Unfasten and bring cable out to operating crank on light pole and attach yoke to crank with yoke pin.

#### SKY FIGHTER - MODEL "C"

#### ELECTRICAL - SEE CIRCUIT DIAGRAM

1. Connect motor switch 3-prong twist lock tail to power supply of same voltage and cycle as motor nameplate. If possible, never operate on 110 volts in order to avoid voltage drop and to assure better motor performance resulting from 220 or 440 volt operation.
2. Connect lights through tail of light switch (2 prongs) to 110 volt power supply.
3. Connect guns through tail of gun switch (2 prongs) to 110 volt power supply.
4. Connect various jumper cords furnished with ride, as per electrical circuit drawing.

#### SKY FIGHTER - MODEL "C"

#### OPERATING INSTRUCTIONS

1. After assembling the four decorating panels to center drive frame, set up is complete and ready to operate.
  - (a) Push "START" button on control switch. This starts motor, causing rotation of ride and gradual raising of planes by travel of hydraulic cylinder.
  - (b) To stop the ride, push "STOP" button on the control switch and then pull valve control crank towards the operator to cause planes to lower and hold crank in this position until planes have stopped rotating and are fully loaded.



2. Hydraulic 3/4" needle valve is provided to regulate the rate at which the planes come down.
  - (a) If the valve is fully closed, the planes will not rise but will only rotate when the "START" button is pushed.
  - (b) If valve is fully opened, the planes may come down too fast under full load of passengers.
  - (c) Regulate the valve position to suit a full load or an average load of passengers. Further adjustment is not required, except as desired.
3. Toggle switch on the lightpole controls operation of the guns.
4. Toggle switch on the frame controls the lights.

NOTE: If the operator so desires, the planes can be raised and lowered while rotating by pulling on the valve control crank to cause lowering of the planes and holding the crank in this position until planes are down as far as desired. Releasing the crank handle will cause the planes to rise.

#### MAINTENANCE

1. The ride is shipped with 10 gallons of Socony-Vacuum DTE light oil in the hydraulic storage drum. Maintain oil level between the high and low marks on the dipstick - using same oil.

#### 2. FLUID DRIVE UNIT

- (a) At the Allan Herschell factory, the fluid drive sheave is given the proper amount of a premium grade of SAE 10W low oil. A change of oil is necessary every five years unless excessive slippage indicates that an earlier change is necessary. Check the oil level yearly. A slippage of 85 R.P.M. between the R.P.M. of the motor and the R.P.M. of the hydrosheave is considered standard. The hydrosheave bearings are lubricated for life. The fluid sheave has the correct quantity of oil when it is positioned with its 2½" marking at the top center position which places the plug opening off center. Fill with proper fluid until oil tends to run out the plug openings. Then, replace pipe plug. Use gasket compound on plug threads.

#### 3. VERTICAL SHAFT WORM REDUCER W-300

- (a) Follow instructions on the name plate using 600W in warm weather and 1/2 of S.A.E. 40 and 1/2 of 600W in cold weather. Maintain proper level.

VERTICAL SHAFT WORM REDUCER W-300 (continued)

- (b) Drain and refill after first 150 hours of operation.
  - (c) Use grease gun (furnished) on upper bearing fitting. Use Mobil MP Grease or King Graphite Product KGP-24.
  - (d) Keep breather fitting clean and open.
4. Use grease gun (furnished) on fittings. Use Mobil MP Grease or King Graphite Product KGP-24 on -
- (a) Motor (Ball bearing type only)
  - (b) Sweeps (at rotating head)
  - (c) Top of rotating head (two fittings)
  - (d) Bottom of rotating head (one fitting)
5. Use light machine oil on chain.
6. HYDRAULIC PLUNGER VALVE MECHANISM:
- The external tension spring is adjusted at the factory to keep the plunger of the hydraulic valve depressed and it should require no adjustment. If necessary, make this adjustment by taking up on the eyebolt nut above the spring.
7. BUZZERS FOR GUN OPERATION.
- (a) If gun buzzers burn out, remove mounting plate and replace with buzzer of same voltage and cycle.

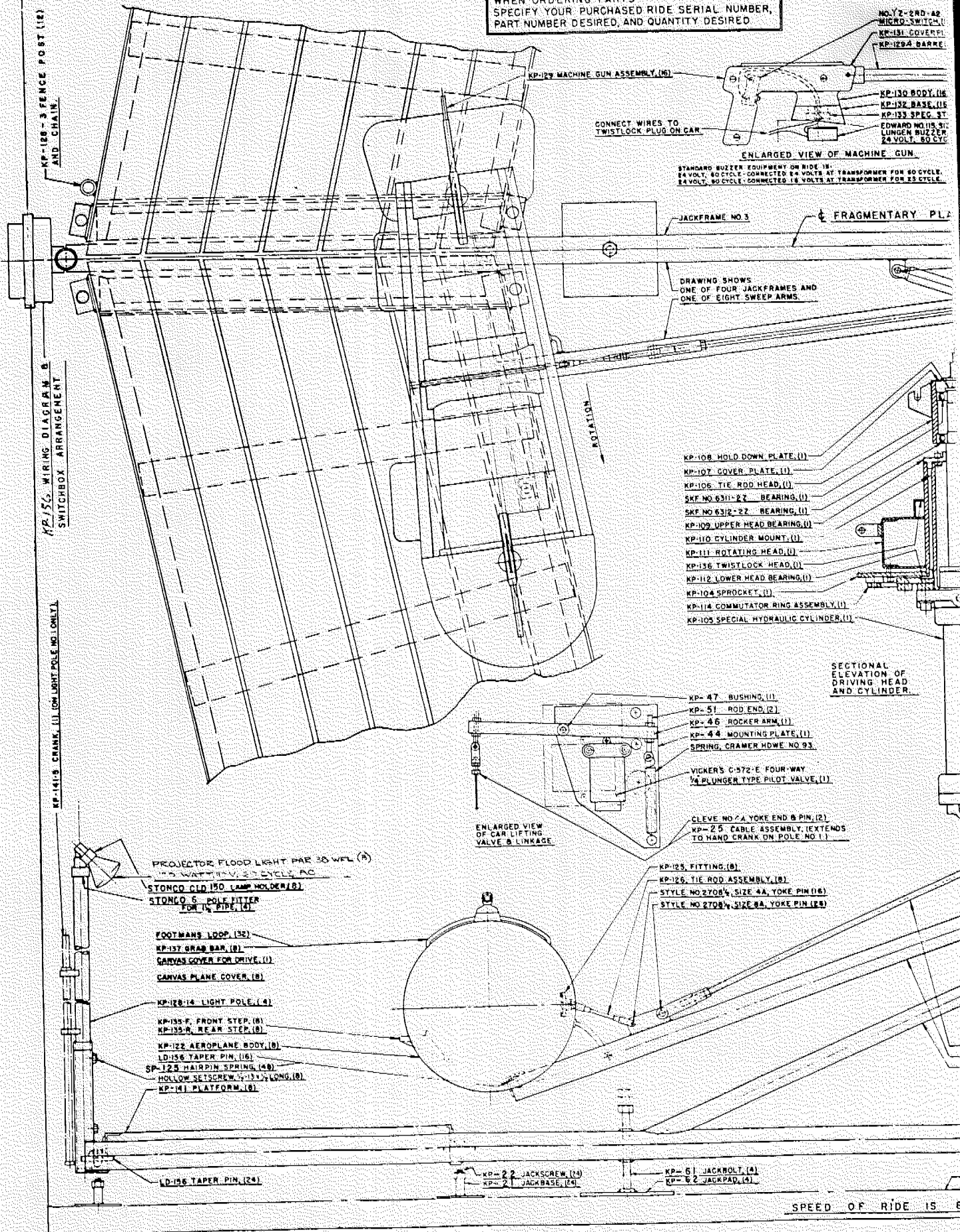
Standard buzzer equipment on ride is:

24V, 60 cycle - Connected 24 volts at transformer for 60-cycle operation.

24V, 60 cycle - Connected 16 volts at transformer for 25 cycle operation.



WHEN ORDERING PARTS  
SPECIFY YOUR PURCHASED RIDE SERIAL NUMBER,  
PART NUMBER DESIRED, AND QUANTITY DESIRED



SPEED OF RIDE IS 8

REV. C 11-27-50  
REV. D 6.11.75 5-31-60  
E - CN-2827 P.W. 5-5-70

6.E. TYPE K MOTOR FRAME 215, 3 H.P., 1725 RPM, 3 PH.  
60 CYCLE BALL BRG. OPEN HORIZONTAL, OR  
KGS 1 PH., 115/230 V.

51  
ONLY.

EDWARDS NO. 88-100 TRANSFORMER. 160 CYCLE IS STANDARD. SPECIFY  
115 V. 110 V.A. CAPACITY. 60 CYCLE. 25 CYCLE WHEN REQUIRED.)

KP-139 JACKFRAME PIN. (10)  
KP-60 STIFF LEG. (1)

VIEW

CLEAN  
BREATHING PIPE  
GREASE  
DRAIN PIPE

TO LIGHT  
POLE NO. 1

SEALED FOR LIFE BEARINGS.  
DO NOT LUBRICATE.

-KP-147, FIBER

1-KP-151 FIBER SHIM (1)

KP-41-2 PULLEY, (1)

UNIVERS

U300 UNIVERSAL WORM REDC  
RATIO IS  $\frac{1}{2}$ :1. MOUNTING "V" (OMIT  
ANGLE FT.) ASSEM. 2B-OUTPUT  
SHAFT PROJECTING UP, WITH  
SINGLE EXTENDED INPUT SHAFT  
STANDARD LENGTH "U" DIMENSION

MAINTAIN GREASE BETWEEN HIGH AND LOW LEVEL  
USE NO. 600W GREASE IN NORMAL WEATHER,  
OR MIXTURE OF ONE HALF SAE 40 AND  
ONE HALF OF NO. 600W IN COLD WEATHER.  
DRAIN AND REFILL AFTER FIRST 150 HOURS  
OF OPERATION.

**GREASE**

WHEN ORDERING  
HYDRAULIC HOSE  
REFER TO HYDRAULIC  
CIRCUIT DRAWING NO KP-121

JUMPER CORD ASSEMBLY, (16)

LINK-BELT NO. RC-80  
SINGLE WIDTH ROLLER  
CHAIN SPROCKET, 11 TOOTH,  
1/2" BORE, KEYSEAT,  
AND SETSCREW, (1)

SEE SECTIONAL  
ELEVATION OF  
DRIVING HEAD  
AND CYLINDER

KP-113 SWEEP PIN. (8)  
1/8-18 x 1/2 LONG HALF DO  
POINT HEADLESS  
SETSCREW (8)

VICKERS PUMP  
NO. V-214-2-1C-1

BROWNING "AK-84H  
SHEAVE 7/8" BORE (1)  
BROWNING "V BELT  
NO. 68 A (2)  
RACINE NO. V-60,  
3/4" METERING VALVE, (1)  
CAR LIFTING VALVE.  
SEE ENLARGED VIEW  
BROWNING NO. BK-60  
SHEAVE, 3/4" BORE, (1)  
ONE "V" BELT NO. 6-42  
KP-119-7 MOTOR BAS

1. TENSION ROD ASSEMBLY. (8)  
2. SWEEP. (8)  
3. JACK FRAME. (4)

KP-118 FRAME, (1)

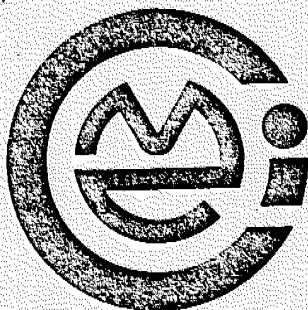
ALLAN HERSCHELL CO. INC  
AMUSEMENT DEVICES IS TOMORROW'S,  
SKY FIGHTER KIDNEY RIDE  
PART NUMBERS AND  
ILLUSTRATION INSTRUCTIONS

NEW YORK	NYC	DATE
TIME		KP-100

SECTIONAL ELEVATION

FOR PLANKING

KP-100



**ALLAN HERSCHELL**

**CHANCE**  
MANUFACTURING CO., INC.

Number:

Date: 29  
12-7-72

Superceeds:

Number:

Date: February 1966

## Service Information

Ride:

STAR JET RIDE

Subject:

ERECTION AND CARE

### REFERENCES:

Blueprints SJ-101 Assembly Drawing  
SJ-100P Parts Numbers Drawing  
HC-153 Hydraulic Circuit Drawing  
KT-101 Foundation Drawing  
SJ-1 Wiring Diagram  
HC-215 Oil Cylinder

Waterman Valve Print  
Link Belt Parts List  
Cutler Hammer Brake Information  
Electric Circuit Diagram and  
Electrical Spec. Sheet  
Packing List

Service Bulletins: Winter Storage  
Lift Cylinders

Pamphlet: "Keeping Hydraulic Systems Clean"  
Installation of Wesche Collector Ring

### ERECTION AND CARE OF STAR JET RIDE - MODEL "C"

1. Refer to print SJ-101 for general arrangement of parts and to print SJ-100P for part number identification and lubrication instructions.
2. Select a spot that is reasonably level, especially for the center of the ride and the platform assembly. Regrade if necessary.
3. Place the center drive assembly into position so that the motor extension cords will run in the direction of the switch box to suit operator's convenience.
4. Level the center drive assembly by placing the level in tool box on top of the beams and using the four adjusting screws and ground plates. Tighten lock nuts.
5. Attach four platform tie rods to center base with bolts and lock nuts, with numbers on tie rods matching numbers on center base.
6. Assemble eight sweeps to center with shafts and safety pins. The numbers on the sweeps must match the numbers on the center drive unit.

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7. Attach eight pull rods to hydraulic cylinders with tapered pins and safety pins. Hook the spring end of the pull rods into the ears on the sweeps, with the grease fittings up.
8. Assemble loading platform using taper pins and safety pins to lock in place. Add screw jacks at platform splices. Platforms are numbered.
9. Assemble Star Jet cars to sweeps with vehicle pins and safety pins. Adjust nut on pull rods to obtain a 10" clearance between bottom of car and platform. On Basic Ride hold 12" to ground.
10. Attach cables from cars to levers on hydraulic cylinders after transferring the valves from their shipping mounts to mounting brackets on top of sweeps.
11. Attach 4 light poles by driving tapered pins into pipe locks. Assemble switch box to lightpole, matching numbers on light poles to numbers on platforms.
12. Connect twist lock jumper cords from motor, light poles and magnetic valve.
13. Erect chain fence with numbers on fence posts matching numbers on platform. Outlet and inlet to ride can be located in any of four places.
14. Check to see that all safety pins are in place and that all set-screws are tight.
15. Lubricate the entire machine, with the exception of the reducer. Use Socony PD-1020A or Shell Retinax "A" (in tool box) on gear drive. When located near salt water, use Fiske Bros. Lubriplate #630AA.
  - (A) Grease lower bearing (6 fittings) daily. Also see sheet #5.
  - (B) Lubricate with grease gun once a year the top ball bearing. This requires removal of top aluminum rain cover for easy access.
  - (C) Oil and grease sweep pins and tension rod sleeve weekly. Check dwg. JS-100P for further and more detailed lubrication instructions.
  - (D) Use Mobil MP Grease or King Graphite Prod. KPG-24. It is more important that commutator rings (under rain cover) be kept clean. Brushes should be kept clean and free to slide in brush holder under spring pressure. Replace when worn or will not operate.

#### 16. FLUID DRIVE UNIT

At the Allan Herschell factory, the fluid drive sheave is given the proper amount of a premium grade of SAE 10@ oil. A change of oil is

necessary every five years unless excessive slippage indicates that an earlier change is necessary. Check oil level yearly. A slippage of 85 RPM between RPM of motor and the RPM of hydrosheave is considered standard. The hydrosheave bearings are lubricated for life.

The fluid sheave has the correct quantity of oil when it is positioned with its 2½" marking at the top center position which places the plug opening off center. Fill with proper fluid until oil tends to run out plug opening. Then replace pipe plug. Use gasket compound on plug threads.

#### 17. VERTICAL SHAFT WORM REDUCER U-300 (CEILING MOUNTED)

- (A) Follow instructions on nameplate, using 600W in warm weather and 1/2 of SAE #40 and 1/2 of 600W in cold weather. Maintain proper level.
- (B) Drain and refill after first 150 hours of operation.
- (C) Keep breather fitting clean and open.

In locations where 600W is not available, have your local supplier recommend a substitute.

During cold weather testing of these rides, the 600W is too heavy which throws an overload on the motor for starting after the machine has set idle for some time. In case this happens, start the ride, giving it a little help to get it up to speed and run it for 15 minutes. After this, it will be free to run normally.

18. Check the "V" belts on the drive for proper tension. When new, adjustment should be made frequently until the initial stretch has been taken up. These are not to be too tight and need very little attention during the season. CAUTION! Any adjustment of the belt drive should be done with motor. Do not change the position of the gear reducer, except to remove excessive backlash between pinion and ring gear. Slide the pump base only to remove looseness in "V" belts between pump and motor.

#### 19. CURRENT SUPPLY AND WIRING

RIDES ARE WIRED AS FOLLOWS: SEE WIRING DIAGRAM SJ-1

1. When customer orders for 1 phase, 3 wire, 115/230 volt supply, wiring is completed by us within the switchbox, for a single current supply by customer.
2. When customer orders for 3 phase, 4 wire, 208/120 supply, wiring is completed within switch box for a single ~~current~~ supply by customer
3. When customer orders for 3 phase, 3 wire, 220 volt motor supply, a separate lighting supply must be provided of 115/230 volt, 3 wire, single phase. Wiring is completed

within box for these two separate supplies by customer.

ADEQUATE VOLTAGE MUST BE MAINTAINED WITHIN  
10% AT ALL TIMES.

20. OPERATING INSTRUCTIONS

- (A) Move safety switch to "ON" position. This is normally left "ON" during the day's operation. (For quick stopping of ride in an emergency, move to "OFF" position).
- (B) Move main dump valve switch to "ON" position. (This is a black handled switch located about 3" below timer switch and permits ride operator to lower cars during rotation of ride).
- (C) Move timer to "ON" position, causing ride to rotate only.
- (D) After 10 seconds, PRESS the push button of the dump valve switch to "ON". (This push button switch is located to the right of the jog switch). This will make oil pressure available to cylinders. The riders may then pull the lap bars to go up or push the lap bars to go down.
- (E) If a ride doesn't start, check the fuses.
- (F) Always use the timer delay type of fuses.

Cable adjustments may become necessary if the riders cannot rise after pulling on the lap bar. Eyebolts with long threaded shanks and jam nuts are provided for adjustment when necessary. Turning the eye bolts farther into the levers and tightening the jam nuts should overcome the difficulty.



## STAR JET RIDE

### MAINTENANCE OF HYDRAULIC SYSTEM

In the tool box is an extra coil for the solenoid of the dump valve. If the ride won't come down at operator's demand, the cause is most likely to be a burned out coil, due to low voltage, or a sticky valve and dirty oil. We suggest immediate replacement of coil. Also, check the power supply line for low voltage and the condition of the oil.

The pressure gauge and pressure relief valve are furnished so that excessively high working pressures will not be imposed upon the motor and other parts of the hydraulic system. If the oil pressure in the system is too low, the vehicles will not rise. A gauge setting of 680# is recommended as sufficient for even the heaviest loads. To check system pressure, open petcock at gauge. If necessary, the system pressure can be changed by operating the relief valve handle. Always turn off petcock after reading to prevent damage to gauge.

The intake oil filter and the air filter should be inspected and cleaned frequently, depending upon local conditions.

If the oil in the 50 gallon tank has become dirty, we suggest replacing it with 45 gallons of Socony DTE light oil, maintaining oil level between high and low marks on dipstick. If oil has become excessively dirty, drain the system, remove suction and discharge pipes from top of tank. Flush inside surfaces of tank with kerosene to remove sludge before refilling tank.

If it should ever become necessary to replace or repair any part of the hydraulic plumbing system, disconnect to the large suction and return hoses at the top of the oil tank. This will eliminate a syphon effect and prevent all the oil in the tank from draining out on the ground.

Keep valve closed except when reading gauge pressure. This will prolong the life of the pressure gauge.

In the event that gauge becomes inoperable, proper pressure setting may be made by loading one car with two heavy adults. Then, back off the Vickers Pressure Relief Valve until pressure will not lift loaded car. Next, increase the setting of valve to lift the loaded car.

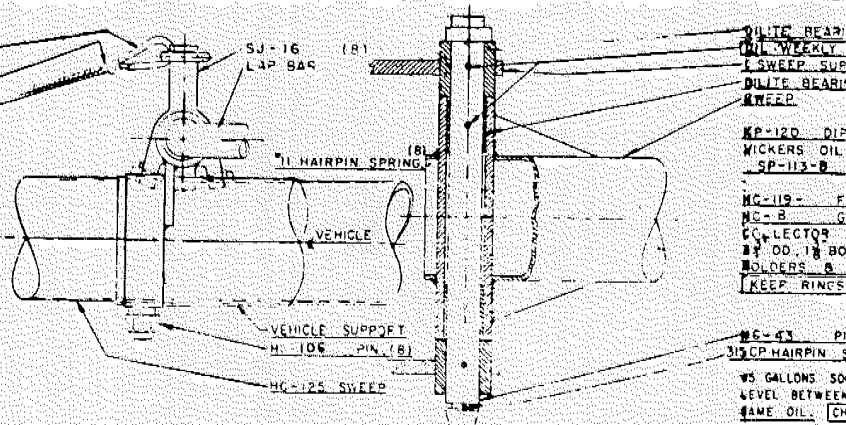
NOTE: Whenever it becomes necessary to check hydraulics at center of ride, it is advisable to disconnect the drive belt from motor to reducer. In this manner, the hydraulics can be checked with the motor running the pump without rotating the ride.

### MAINTENANCE OF LOWER CENTER BEARING

Once a year, grease should be softened by adding automotive flushing oil through fan opening and draining entire bearing through the bottom plug. Then, regrease weekly at the six grease fittings with Mobil MP Grease or King Graphite Product KPG-24. If this is not done, the old grease will oxidize, stiffen and separate and corrosion will follow.

THOMAS LAUGHLIN G-411 THIMBLE (16)  
NICO PRESS SLEEVE 1/4 WIRE CABLE SIZE 10-3-M (16)  
HC-175 WIRE CABLE 1/4 WIRE (16)  
HC-49 LEVER (16)  
VICKERS VALVE C-372-E MODIFIED (16)  
HC-48 (16)

SWEEP & VEHICLE



HC-254-57 TYPE K MOTOR, FRAME X25  
BALL BEARING OPEN HORIZONTAL  
HC-255 1/4" H. 1/4" H. 230 V. 60  
WITH SPCC SHAFTS  
TWIN DISC CO. HIGH SHEAVE  
REFER TO RIDE INS  
FOR MAINTENANCE INFORMATI  
BRONZE SHAFT 27873-11  
C-12 A.4 SHEAVE

BRONZE "SP-108 V BELT (1)  
2" W. 1/4" H. 1/4" H. 230 V. 60  
BRONZE AK-59 H. SHEAVE (1)  
HC-132 SUB PAGE 1 R. MOT.  
HC-191 LOWER HEAD BEARING  
HC-194 LOWER BEARING (1)  
HC-204 BRONZE INSERT (1)

PAR-38 PROJECTOR OUTDOOR FLOOD LAMP 150 WATT (20)  
STEBERLITE CLO-150 LAMP HOLDER (20)  
STEBERLITE POLE FITTER  
S-301, S-302 FOR 1/2" PIPE  
(4)

HC-84 LIGHT POLES (4)

SP-102 SWITCH BOX (1)  
SP-104 SWITCH BOX COVER (1)

S-1 WIRING DIAGRAM 1 P.H. & 3 P.H.

ESC 2112 PIN (4)  
HC-87 JACKSCREW (24)  
HC-86 JACKBASE (24)  
LD-158 TAPER PIN (24)

HC-58 GUID (16)  
HC-193-3 BEARING (16)

HC-128-13 GREASE FITTINGS (24)  
"11 LIBERTY MACH. CHAIN  
HC-114 PLATFORM (12)  
HC-86 PLATFORM TRIGGER (4)

HC-198 PIN  
SJ-17 LAP BAR ASSY (8)  
HC-178 KNUCKLE FOR HYDR CYL  
HC-106 PIN (16)  
HC-139 SPRING (16)  
HC-62 (16)  
HC-138 TENSION WCD (16)  
VICKERS VALVE C-372-E MODIFIED PER  
HC-161 (16) FOR OTHER HYDRAULIC SYSTEM  
PARTS, SEE A.H.C. PRINT HC-153  
TOMKINS & JOHNSON 3" CYLINDER \*LSM3,  
14" STROKE, NO CUSHION (16)  
TOMKINS & JOHNSON CLEVIS FOR 3"  
CYLINDER \*SM-362 (16)  
HC-152 PIN FOR CYLINDER (16)  
OIL VALVE ARM WEEKLY (8 PLACES)

IF OIL HAS BECOME EXCESSIVELY DIRTY  
DRAIN IT. REMOVE 2 TOP FLANGES CLEAN  
ALL INSIDE SURFACES OF TANK WITH KEROSENE

SEE SECTIONAL ELEVATION OF  
DRIVING HEAD AND BASE

NOTE A  
ONCE A YEAR GREASE SHOULD BE SOFTENED BY HEATING TO 100°F. OIL THEN FLOW OUT AND DRIVING  
ENTIRE BEARING THRU PLUG A. THEN REGREASE WEEKLY AT THE 6 GREASE FITTINGS WITH S.C.M. GREASE (16)  
IF THIS IS NOT DONE THE OLD GREASE WILL OXIDIZE STIFFEN AND SEPARATE AND CORROSION WILL FOLLOW

WHEN ORDERING PARTS  
SPECIFY YOUR PURCHASED RIDE SERIAL  
PART NUMBER DESIRED AND QUANTITY OF  
BEFORE ORDERING HYDRAULIC HOSE REFER  
HYDRAULIC CIRCUIT PRINT HC-153

SPEED OF RIDE 15 L.P.M.

1-12-5 (10)

AT OIL TANK  
1-12-5 (16)

OK (1)  
ER CAP & AIR FILTER  
DOVE, CLEAN IN KEROSENE  
REINSTALL ONCE PER MONTH  
E. CGNN (1)  
T. (1)  
ASSY. TYPE NRS. 6 RINGS  
COMPLETE WITH 6 BRUSH  
IS  
FINGERS CLEAN & DRY

81  
O. (8)  
VACUUM MED. WGT. OIL, MAINTAIN OIL  
1/8" LOW MARKS ON DIPSTICK, USING  
OIL LEVEL TWICE PER SEASON

10 HP, 1760 RPM, 60 CYC.  
3 PH., 208/220/440 V. OR  
2.5 H.P. MOTOR

SHSD 1/2" PIPE (1)  
CTION SHEET

VE 1/4" PIPE (1) (1)

PUMP

GREASE DAILY

GREASE WEEKLY

DRAIN PLUG

GREASE WEEKLY

DRAIN PLUG

GREASE WEEKLY

DRAIN PLUG

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JACK 1/2" CONDUIT FITTING "B2-075" (1)

HC-128 RAIN COVER (1)

HC-120 FLANGE CGNN (1)

GREASE YEARLY

HC-9 GASKET (1)

OIL WEEKLY, 8 PLACES

OILITE BEARING "AA-B39-2" (8)

HC-112 COLLECTOR RING POST (1)

TRUARC RING "S100-300" (1)

HC-109 COLLECTOR RING PLATE (1)

BEARING SCALMASTER "MFC-48" BALL

BEARING, 3" BORE (1)

FLEXIBLE STEEL CONDUIT 3/4" (1)

HC-124 CENTER COLUMN (1)

HC-117 OIL DRUM (1)

PULLINGER OIL FILTER "H-5C 200 MESH" (1)

REMOVE ONCE PER YEAR, WASH IN KEROSENE,

BLOW AIR FROM INSIDE TO OUTSIDE &

REINSTALL

HC-200 RAIN COVER (1)

HC-167-1 SUPPLY MANIFOLD (1)

WATERMAN VALVE 4 3/8" 3" HO V. 800 C.T. (1)

HC-133-1 PUMP BRACKET (1)

BROWNING SKEAVE "2B-124" 1" BORE

VICKERS RELIEF VALVE "CT-06-10"

VICKERS PUMP "V-334-19-10-11RM" (1)

BLOWER, DAYTON TYPE "2-C-611" (1)

CLEAN BREATHING PIPE

OIL LEVEL & FILL PIPE

SEE LUBRICATION INSTRUCTIONS

ON NAME PLATE

HC-166 SHIPPING STRAP (1)

REMOVE BEFORE STARTING

RIDE, REPLACE BEFORE

SHIPMENT

HC-122 RIDE SUB BASE (1)

DRAIN PIPE SEE NOTE A

ALBION CASTER "B-810-R"

LINK BELT WORM REDUCER

U-300 UNIVERSAL RATIO 5 1/2:1

MOUNTING Y WITH OUTPUT SHAFT

PROJECTING DOWN (OMIT ANGLE FEET)

ASSEMBLY 3A WITH DOUBLE EXTENDED

INPUT SHAFT STANDARD LENGTH

U DIMENSIONS

HC-179 BRACKET MOUNTING (1)

CUTLER HAMMER S-4 BRAKE (1)

HC-29 JACKPLATE (4)

HC-31 JACKSCREW (4)

ALBION CASTER "B-810"

KA-153 SPLIT RING GEAR (1)

CLEAN GEAR DRIVE WITH KEROSENE

AND RELUBRICATE WITH SODOLY

PD-1020A OR SELL RETINAX "A"

TWICE PER SEASON

HC-118 PLATE FOR RING GEAR (1)

1/8" 6 HEX. JAW NUTS (4)

TIGHTEN AFTER LEVELING

SJ-15-1 BLUE BANNER WITH LETTER (4)

SJ-15-2 BLUE BANNER (4)

OIL WEEKLY, 18 PLACES

S.H. CH "171" (1)

ADJUST NUTS TO OBTAIN 6" CLEARANCE

AFTER LEVELING CENTER LINE V.V.

AND PLATE-MS

FOR FURTHER INFORMATION REFER TO:-

ERECTION AND CARE OF

INSTRUCTION SHEETS

ASSEMBLY PRINT

HYDRAULIC CIRCUIT PRINT

AT-101 FOUNDATION PRINT

ELECTRIC CIRCUIT PRINT

ELECTRIC CONSUMPTION DATA SHEET, 8 1/2" x 11"

PACKING DATA SHEET, 8 1/2" x 11"

PHAMLET "HOW TO KEEP HYDRAULIC SYSTEMS CLEAN"

DRAWING CUT ON THE GROUND

NOTE:-

IF IT SHOULD EVER BECOME NECESSARY

TO REPLACE OR REPAIR ANY PART OF THE

HYDRAULIC PLUMBING SYSTEM, DISCONNECT

THE LARGE SUCTION AND RETURN HOSES

AT THE TOP OF THE OIL TANK. THIS

WILL ELIMINATE A SYPHON EFFECT AND

PREVENT ALL THE OIL IN THE TANK FROM

DRIPPING OUT ON THE GROUND

ALLAN HERSCHMELL CO. INC.

AMUSEMENT DEVICES BUFFALO, N.Y.

STAR JET RIDE

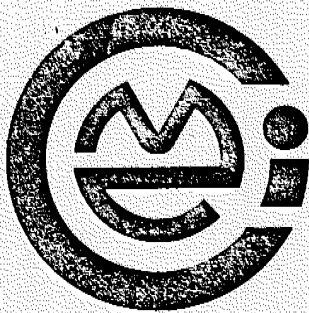
PARTS NUMBERS AND

LUBRICATION INSTRUCTIONS

ON OTHER PAGES OF DRAWING

NO. 5400P





**ALLAN HERSCHELL**

**CHANCE**  
MANUFACTURING CO., INC.

Number: 8  
Date: 6-20-71

Superceeds:  
Number:  
Date:

## Service Information

Ride: KIDDIE BOAT RIDE MODEL "C"

Subject: ERECTION AND CARE

### REFERENCES:

Blueprint KBC-100 Assembly Dwg.  
Blueprint KB-100-P Parts Number Dwg.  
Blueprint KT-101 Foundation Dwg.

"SUGGESTED CHEMICAL TREATMENT OF WATER"

### ERECTION AND CARE OF KIDDIE BOAT RIDE MODEL "C"

Refer to print number KBC-100 for general arrangement of parts and to number KB-100-P for part number identification and lubrication instructions.

Select a spot that is reasonably level, especially for the center of the ride and the tank assembly.

Place the circular centerpole (KB-117) into position so that the motor will be located near light pole #1 (Switch Pole) to suit operator's convenience.

Place the drive unit into position and bolt it down tightly after pinion (KA-147) is properly meshed with ring gear. Check the "V" belts on the drive for proper tension. These have been set correctly at the factory, but when new, adjustment should be made frequently until the initial stretch has been taken up. These are not to be too tight and need very little attention during the season. CAUTION: Any adjustment of the belt drive should be done with the motor. Do not change the position of the gear reducer.

Fasten the centerpole assembly KB-118 securely to the centerpole base assembly (KB-117) by means of the four studs. Position these assemblies so that their markings match.

Place the ring gear (KA-153) on top of the 6" dia. fiber collar of centerpole assembly (KB-118).

Level the base (KB-117) and plumb the centerpole (KA-154-2) using shims under the circular base (KB-117) if necessary. On park rides, four 7/8" dia. holes are provided in the base ring (KB-117) which can be used for bolting down after leveling.

Use expansion bolts if ride is mounted on a concrete slab (KT-101).

Attach three centering rods (KB-115 and KB-116) over lugs on base ring (KB-117) and to tank sections as shown on assembly drawing KBC-100. Bolt six tank sections together, after leveling each section as it is placed, using the level furnished with the ride.

Insert light and switch pole marked #1 into holes of the tank section located nearest to motor. Assemble remaining cornice uprights (KB-119).

The cornice sections are numbered according to the upright pipes to which they attach and must be put on in order of their numbers. Attach the head shields. The spot light brackets are also marked to suit the uprights. These must also be placed in their proper order. Then plug in all plugs to complete the circuit.

Attach the switch box to #1 upright and make up the lead connections and connect. Twist lock connectors complete are furnished for these connections.

Spread tent top over the centerpole. Place the tent pole on top of the centerpole and raise the tent about halfway. When in this position hook the outside edge of the tent in the loops provided on the inside of the cornice; then raise the tent to its proper height.

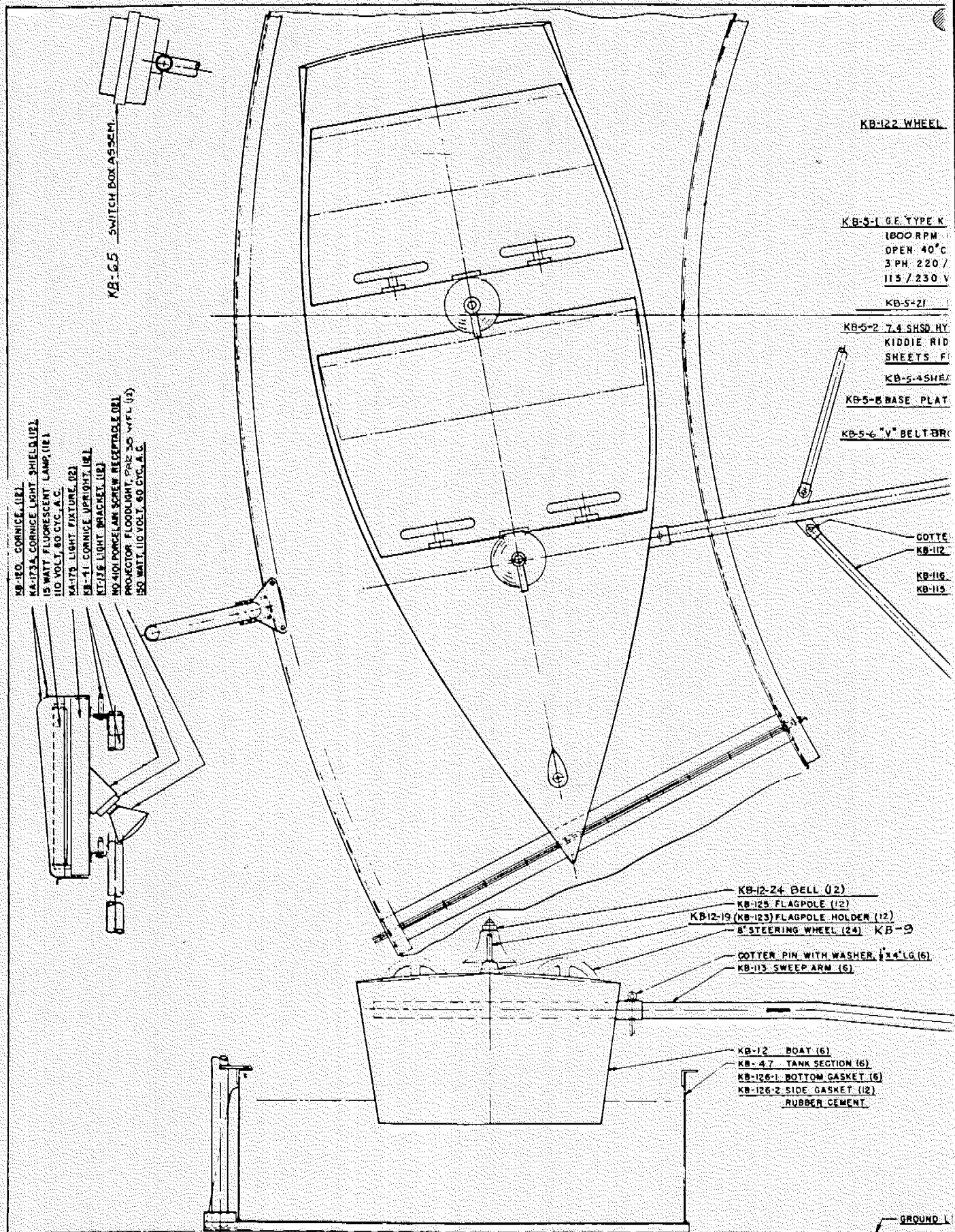
Place 6 sweep arms (KB-113) between angles on sweep plate (KB-112) between sweep arms (KB-113) and retain with 3/8" x 1 1/2" long cotter pins.

Fasten 6 boats (KB-106) to sweep arms with 1/2" x 4" long cotter pins.

**CAUTION:** The wiring on this ride has been arranged for a separate connection to the lights from that of the drive motor. The ride is designed to run on 60-cycle 220 volt current (or 110 volt). Satisfactory results might not be obtained on lines having considerable drop in voltage, especially when operating on 110 volt line, and to insure proper operation, voltage of 105 to 115 must be maintained.

Motor connections are for 220 volts when ride leaves factory. If 110 volt current must be used, motor connections must be changed to suit wiring diagram on motor nameplate.

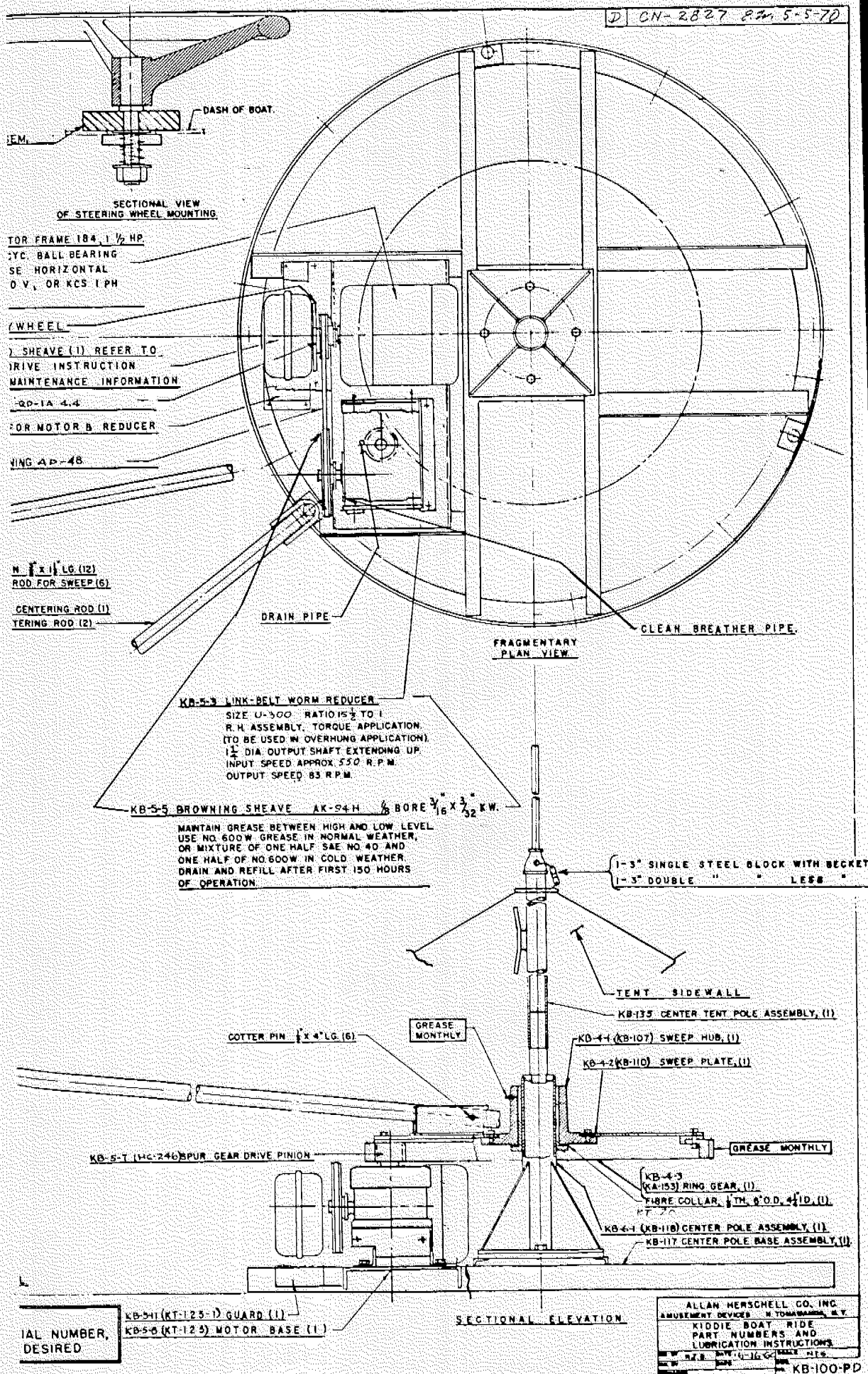
Operate the lighting only on 110 volt, 60-cycle current.

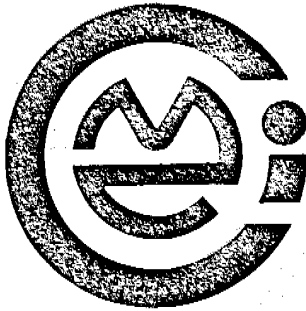


WHEN ORDERING PARTS  
SPECIFY YOUR PURCHASED RIDE S  
PART NUMBER DESIRED, AND QUANTITY

SPEED OF RIDE IS 4 RPM







**ALLAN HERSCHELL**

**CHANCE**  
MANUFACTURING CO., INC.

Number: 33  
Date: 12-7-72

Superceeds:  
Number: June 1969  
Date:

## Service Information

Ride: KIDDIE ELECTRIC BUGGY (1960)

Subject: ERECTION AND CARE

### 1960 KIDDIE ELECTRIC BUGGY (ERECTION AND CARE)

Refer to the attached drawing which shows the general arrangement of ride. Note the locations of the various lengths of track, cable and control station. On all standard rides, tracks are either 4 ft. 6 inches straight, 9 ft. 0 inches, or standard curve and are shown to scale. Any special lengths are identified on the drawing.

Place the track for the loading zone into place first. (Refer to Dwg. KH-65 for typical track joint). Assemble all tracks using taper pins LD-156 for outside rail joints, including hairpin springs SP-125. Center third rail is connected by slotted link KH-3. Note omission of these links in four places for zone control of buggies. All taper pins and link bolts are to be drawn up tight for good electrical contact and maintain grade of track level within 2%. Place chemically treated wooden 2 x 4's under tracks, one at each track joint, one under center of each 9 ft. straight and one under center of each curve. Assemble all supply cables as shown on general arrangement drawing.

Before placing buggies on the track, swing center rear guide roller mount from near horizontal position to vertical position. This is done by removing lower 1/2 bolt and replacing this bolt into bottom hole after swinging guide roller mount to vertical position.

A toggle switch on the front center of chassis frame permits lights to be turned off during the daytime. A circuit breaker (I-T-40 Amp. EQW) switch is located next to the toggle switch to protect the motor. This switch lever should be operative to start the buggy. If a buggy does not start, check this switch. If derailment occurs and tripping occurs during operation, circuit breaker must be reset, after placing buggy on track in order to operate the buggy.

Run a single phase, 60 cycle supply line to the lower disconnect switch on the control station - of sufficient size to maintain full voltage at the 9 KVA transformer. The current draw for each car is 28 amps at 32 volts. The output side of the transformer is 32 volts. The lamps for the side lights of the buggy (32 volt) are G. E. #532 lamps and should be obtainable locally. The three colored momentary push buttons are numbered and control the three loading zones of track.

Unless you have specified a special voltage, the transformer connections will be 230 volts when the ride leaves our factory. The cars will not operate satisfactorily if the input voltage from the power line drops below the permissible variation. If the buggies are sluggish or if the motors overheat, check the input voltage to the transformer.

It is important not to send off all the buggies at one time. They must run properly spaced around the ride.

Load and then start the buggies at about 10 second intervals to avoid bumping. If a buggy is derailed, the safety switch should be shut off to protect the motor in case the circuit breaker should not function in the car. Reset when operative if the circuit breaker should trip at derailment.

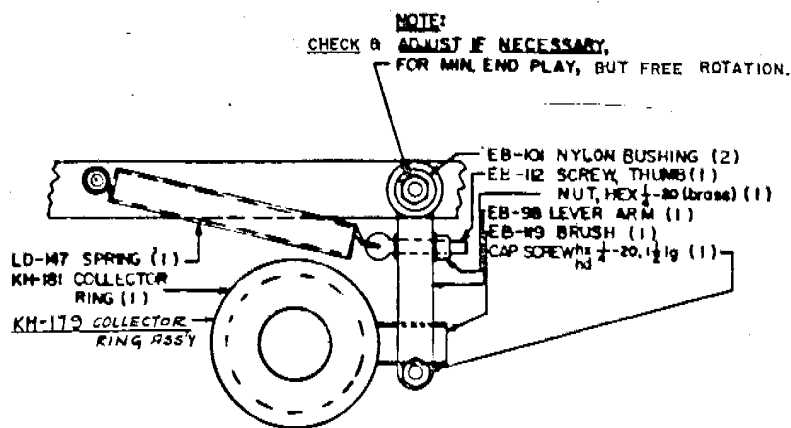
NOTE: See Parts Dwg. EB-100P for Buggy maintenance and lubrication.

While there is no shock hazard from the track it would be well to provide a fence to prevent bystanders from walking into the path of the cars in motion.

Do not permit grass or weeds to grow around the third rail as a substantial loss of voltage can occur by grass shorting the third rail to ground. This may result in poor performance.

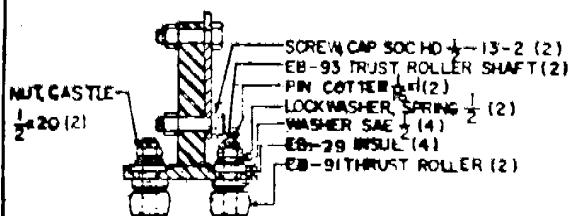
Lubricate the center rail of track with #95 Dixon Graphkote. Outer rails of track may be lubricated with #95 Dixon Graphkote if a slight squeal of the rear wheels on curves is found to be objectionable. This material is in the tool box. It should be applied with a paint brush.

-----  
NOTE: Proper functioning of brushes is essential to operation of the buggies. When installing new brushes make sure that they properly contact the brass collar for current flow. Before installing new brushes, clean dirt, rust, etc. from face of the collar and then emery cloth this surface. When clean, apply a light coating of vaseline to surface to lubricate during run-in period. Rear brushes are required to carry ground to the track. Do not ground motor to frame as current flow through ball bearing pillow blocks will destroy bearings.

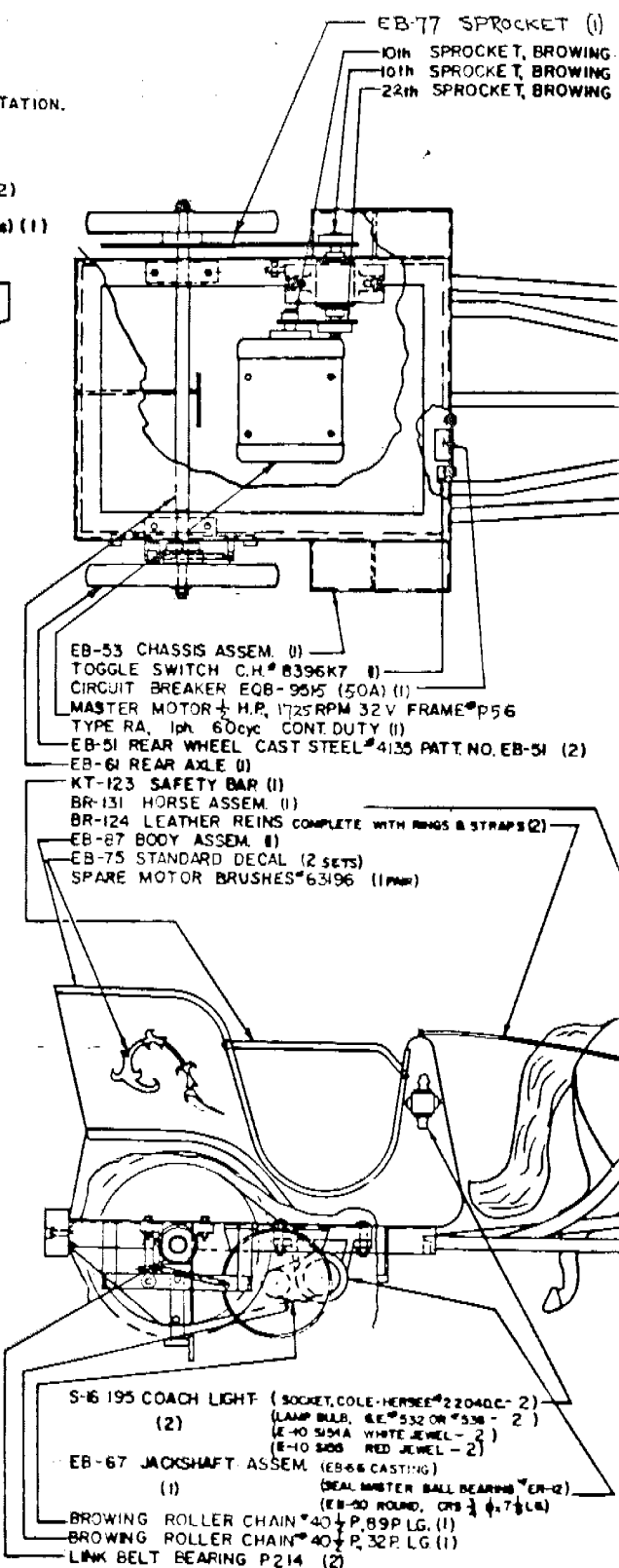


**NOTE:**  
When replacing brushes, (EB-119) - wrap fine sandpaper around collector ring, with abrasive end up. Rotate collector ring against normal brush spring pressure. Seat in brush to form contact. Remove all abrasive from ring & brush before operation.

NEVER LUBRICATE COLLECTOR RING OR BRUSH

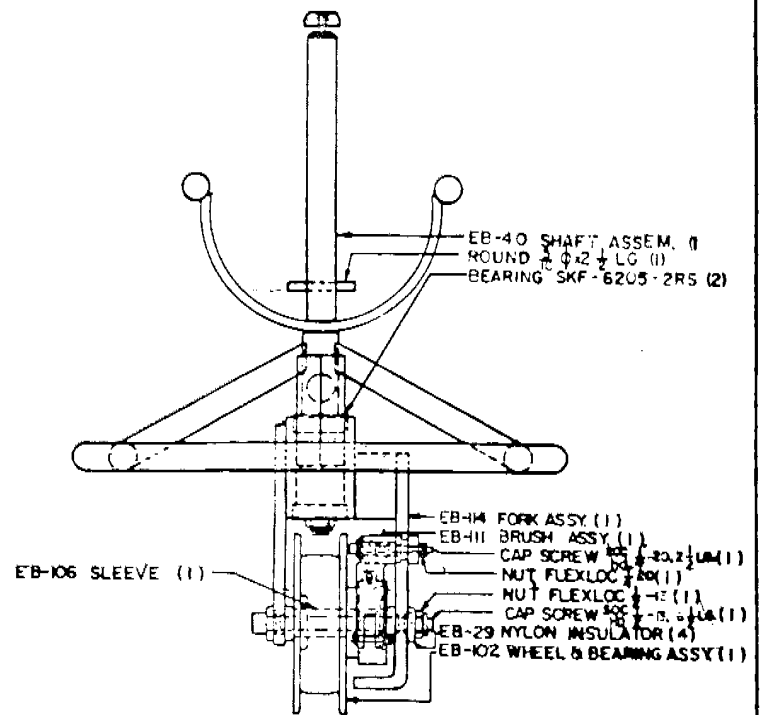
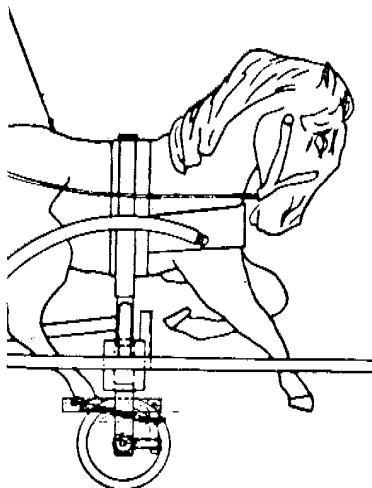
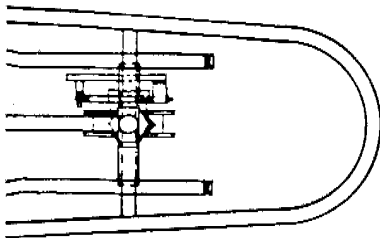


EB-92 THRUST ROLLER ASSY.



GREASE BEARINGS ONCE A MONTH  
LUBRICATE CHAIN PERIODICALLY

4010 1/8 BORE  
4010 1/2 BORE  
4022 1/2 BORE

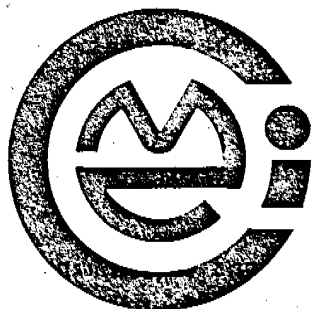


FRONT WHEEL ASSEM EB-110

THIS DWG LEFT A.H. River, China

[illegible]

SUPERSEDES EB100P



**ALLAN HERSCHELL**

**CHANCE**  
MANUFACTURING CO., INC.

Number:

Date:

34  
12-7-72

Superceeds:

Number:

Date:

## Service Information

Ride:

KIDDIE TANK RIDE - MODEL "C"

Subject:

ERECTION AND CARE

REFERENCES: KTC-100 Assembly Drawing  
KT-100-P Part Number Drawing  
KT-101 Foundation Drawing

### ERECTION & CARE OF KIDDIE TANK RIDE- MODEL "C"

Refer to print number (KTC-100) for general arrangement of parts and to (KT-100-P) for part number identification and lubrication instructions.

Select a spot that is reasonably level, especially for the center of the ride.

Place the circular centerpole (KA-149) into position. This base is marked to show the position of the #1 jackstand (the jackstand to which switch box attaches for operating the ride) which should be located for the convenience of the operator.

Fasten the centerpole assembly (KB-118) securely to the centerpole base assembly (KA-149) by means of the four studs. Position these assemblies so that their markings match.

Place the drive unit into position and bolt it down tightly after pinion (KA-147) is properly meshed with ring gear. Check the "V" belts on the drive for proper tension. These have been set correctly at the factory, but when new, adjustment should be made frequently until the initial stretch has been taken up. These are not to be too tight and need very little attention during the season. Caution: Any adjustment of the belt drive should be done with the motor. Do not change the position of the gear reducer.

Place the ring gear (KA-153) on top of the 6" dia. fiber collar of the centerpole assembly (KB-118).

Level the base (KA-149) and plumb the centerpole (KA-154) using shims under the circular base (KA-149) if necessary. On park rides, four 7/8" dia. holes are provided in the base ring (KA-149) which can be used for bolting down after leveling. Use expansion bolts if ride is mounted on a concrete slab (KT-101).



adjusting base (KA-160) into position. Continue with the balance of the jackstands and uprights.

All jackstands must be leveled radially as they are placed. Then level also from one jackstand to the other beginning from #1, using the level on the straight edge furnished with the ride.

Place platform sections beginning with platform from #2 to #3 jackstand continuing around the ride to jackstand #10, then place both platforms between #1 and #10 and #1 and #2 jackstands, raising both platform ends together above jackstand #1. When matched at this point then lower both together to rest on #1 jackstand and use the adjustable clamp to hold them down.

The cornice sections are numbered according to the upright pipes to which they attach and must be put on in order of their numbers. Attach the head shields. The spot light brackets are also marked to suit the uprights. These must also be placed in their proper order. Then plug in all plugs to complete the circuit.

Attach the switch box to #1 upright and make up the lead connections and connect. Twist lock connectors complete are furnished for these connections.

Spread tent top over the centerpole. Place the tent pole on top of the centerpole and raise the tent about half way. When in this position hook the outside edge of the tent in the loops provided on the inside of the cornice, then raise the tent to its proper height.

Place 8 sweep arms (KT-114) between angles on sweep plate (KT-110) and fasten with the six 1/2" x 3" long hex hd. capscrews and locknuts. Be careful not to injure the electric cord inside the pipe. Assemble 7 tie rods (KT-135) and 1 adjustable tie rod between sweep arms (KT-114) with the 1/2" rivets and safety springs. Use adjustable tie rod to remove looseness between sweep arms.

Fasten 8 Tank cars (KT-113) to sweep arms with 1/2" x 3" long hex hd. capscrews and locknuts.

Connect 16 make twist lock jumper cords from Tank cars to sweep arms and from sweep arms to rotating head.

Attach sweep canvas with springs to the projecting eyes on the sweep arms.

**CAUTION:** The wiring on this ride has been arranged for a separate connection to the lights from that of the drive motor. The ride is designed to run on 60-cycle, 220 volt current (or 110 volt). Satisfactory results might not be obtained on lines having a considerable drop in voltage, especially when operating on a 110 volt line, and to insure proper operation, voltage of 105 to 115 must be maintained.

Motor connections are for 220 volts when ride leaves factory. If 110 volt current must be used, motor connections must be changed to suit.

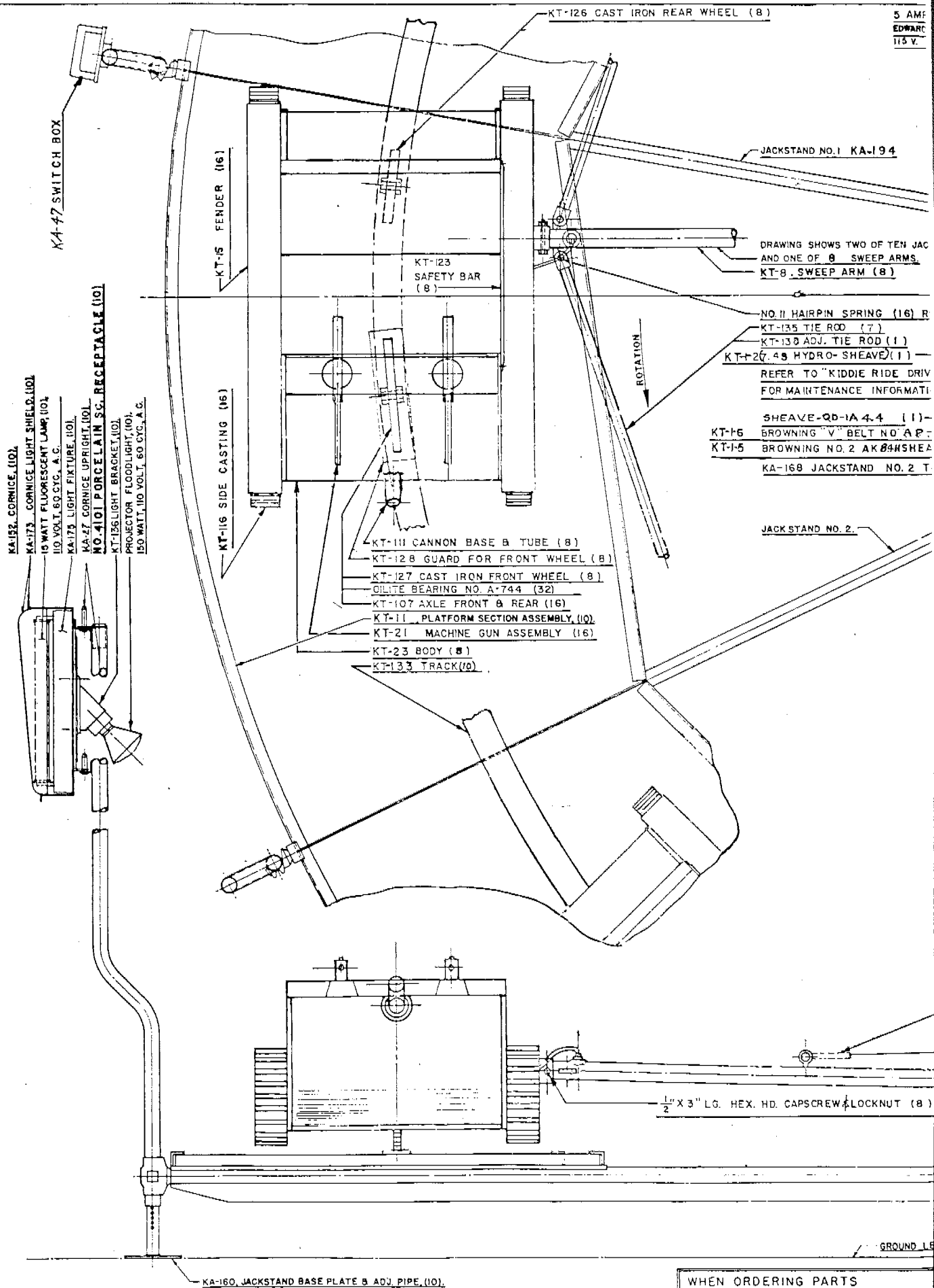
Wiring diagram on motor name plate.

**BUZZERS FOR GUN OPERATION:**

If gun buzzers burn out, replace with buzzer of same voltage and cycle.

Standard buzzer equipment on ride is: 24 V, 60 cycle - connected 24 volts at transformer for 60-cycle operation.

24 V., 60-cycle - connected 16 volts at transformer for 25-cycle operation.



KA-152 CORNICE (10)  
 KA-173 CORNICE LIGHT SHIELD (10)  
 15 WATT FLUORESCENT LAMP (10)  
 110 VOLT, 60 CYC. A.C.  
 KA-173 LIGHT FIXTURE (10)  
 KA-47 CORNICE UPRIGHT (10)  
**NO. 4101 PORCELAIN S.C. RECEPTACLE (10)**  
 KT-136 LIGHT BRACKET (10)  
 PROJECTOR FLOODLIGHT (10)  
 150 WATT, 110 VOLT, 60 CYC. A.C.

KA-47 SWITCH BOX

KT-5 FENDER (16)

KT-116 SIDE CASTING (16)

KT-123 SAFETY BAR (8)

KT-126 CAST IRON REAR WHEEL (8)

JACKSTAND NO. 1 KA-194

DRAWING SHOWS TWO OF TEN JACKSTANDS AND ONE OF 8 SWEEP ARMS.  
 KT-8 SWEEP ARM (8)

ROTATION

NO. 11 HAIRPIN SPRING (16) R  
 KT-135 TIE ROD (7)  
 KT-138 ADJ. TIE ROD (1)  
 KT-20 48 HYDRO-SHEAVE (1)

REFER TO "KIDDIE RIDE DRIVE" FOR MAINTENANCE INFORMATION

SHEAVE-QD-1A 4.4 (1)  
 KT-16 BROWNING "V" BELT NO. A.P.  
 KT-15 BROWNING NO. 2 AK 84HSHEA  
 KA-168 JACKSTAND NO. 2 T

JACKSTAND NO. 2

KT-111 CANNON BASE & TUBE (8)  
 KT-128 GUARD FOR FRONT WHEEL (8)  
 KT-127 CAST IRON FRONT WHEEL (8)  
 OILITE BEARING NO. A-744 (32)  
 KT-107 AXLE FRONT & REAR (16)  
 KT-11 PLATFORM SECTION ASSEMBLY (10)  
 KT-21 MACHINE GUN ASSEMBLY (16)  
 KT-23 BODY (8)  
 KT-133 TRACK (10)

1/2" X 3" LG. HEX. HD. CAPSCREW & LOCKNUT (8)

KA-160 JACKSTAND BASE PLATE & ADJ. PIPE (10)

GROUND L.E.

WHEN ORDERING PARTS  
 SPECIFY YOUR PURCHASED RIDE SET  
 PART NUMBER DESIRED, AND QUANTITY  
 SPEED OF RIDE = 5 REV. PER MINU

FUSE (2) UNDER COVER OF BUZZER TRANSF.  
 10. 00-100 TRANSFORMER (60 CYCLE IS STANDARD SPECIFY  
 O.V.A. CAPACITY, 60 CYC 25 CYCLE WHEN REQUIRED)

STANDS

1/2" X 1 1/2" LG. (16)

1" INSTRUCTION SHEETS

N.

46 (1)  
 1/2" BORE (1)

NO. 10

CLEAN

BREATHING PIPE

DRAIN PIPE

FRAGMENTARY  
 PLAN VIEW

KT-120-1 COMMUTATOR RINGS (2).

KT-1-3 LINK-BELT WORM REDUCER

SIZE U-300 RATIO 15 1/2 TO 1  
 R.H. ASSEMBLY, TORQUE APPLICATION.  
 (TO BE USED IN OVERHUNG APPLICATION).  
 1 1/4" DIA. OUTPUT SHAFT EXTENDING UP.  
 INPUT SPEED APPROX. 530 R.P.M.  
 OUTPUT SPEED 5 1/2 R.P.M.

MAINTAIN GREASE BETWEEN HIGH AND LOW LEVEL.  
 USE NO. 600W GREASE IN NORMAL WEATHER,  
 OR MIXTURE OF ONE HALF SAE NO. 40 AND  
 ONE HALF OF NO. 600W IN COLD WEATHER.  
 DRAIN AND REFILL AFTER FIRST 150 HOURS  
 OF OPERATION.

GE. TYPE K MOTOR FRAME 184

1 1/2 HP, 1800 RPM, 60 CYC. BALL BRG.  
 OPEN 40° C RISE HORIZONTAL.  
 3PH 220/440V, OR 1PH. 115/230V.



LD-147 SPRING (8) & S HOOKS (16)

HEX. HD. CAPSCREW 1/2" X 3" LG. & LOCKNUTS (8)

SWEEP CANVAS (1)

GREASE MONTHLY

HC246 SPUR GEAR DRIVE PINION

KA-154 CENTER TENT POLE ASSEMBLY (1)

KT-18 TWIST LOCK HEAD (1)

KT-117 SWEEP HUB (1)

KT-110 SWEEP PLATE (1)

JUMPER CORD ASSEMBLY (8)

GREASE MONTHLY

KA-153 RING GEAR (1)

FIBRE COLLAR, 1 1/2" TH. 6" O.D. 4 1/2" I.D. (1)

KA-113 CENTER POLE ASSEMBLY (1)

KA-149 CENTER POLE BASE ASSEMBLY (1)

VEL.

KT-125-1 GUARD (1)

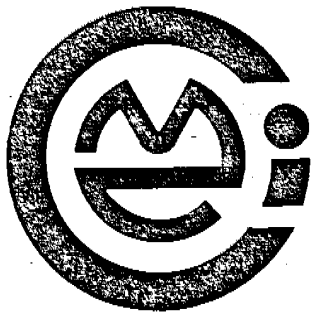
KT-125 MOTOR BASE (1)

SECTIONAL ELEVATION

SERIAL NUMBER,  
 DESIRED.

TE.

ALLAN HERSCHELL CO. INC.  
 AMUSEMENT DEVICES - NEW YORK, N. Y.  
 KIDDIE TANK - RIDE  
 PART NUMBERS AND  
 LUBRICATION INSTRUCTIONS.  
 DATE: 1-1-58  
 BY: J. H. B.  
 CHECKED: J. H. B.  
 NO. KT-100-FE



**ALLAN HERSCHELL**

**CHANCE**  
MANUFACTURING CO., INC.

Number:  
Date: 28  
12-7-72

Superceeds:  
Number:  
Date:

## Service Information

Ride: JOLLY CATERPILLAR RIDE

Subject: ERECTION AND CARE

### REFERENCES:

Blueprint JO-1 Assembly Drawing  
Blueprint JO-100-P Parts Number Drawing  
Blueprint KT-101 Foundation Drawing

### ERECTION AND CARE OF JOLLY CATERPILLAR RIDE - MODEL "C"

Refer to photograph and print number JO-1 for general arrangement of parts, and to JO-100-P for part number identification and lubrication instructions.

Select a spot that is reasonably level, especially for the center of the ride. Place the circular center post assembly #JO-31 into position and fasten with three ground stakes #JO-38, or with 3/4" expansion bolts if concrete is used. If a track has been ordered, fasten three tie braces #JO-35 to center post with six 1/2" x 3" long machine bolts, lockwashers and nuts. Then assemble 12 track sections together with 3/4" x 2" long cap screws, lockwashers and nuts. Use six 3/4" expansion bolts or six ground stakes #JO-38 to hold down the three tie braces #JO-35.

Attach two radius arms #JO-36 to centerpost JO-31 with two 3/4" dia. x 5-3/4" long pins #JO-34-5. Connect car end of radius arms to cars #1 and #3 with two 3/4" castle nuts, four special washers and two cotter pins.

Connect cars #1, 2 and 3 with eight 3/4" bolts, nuts and lockwashers per JO-20 and JO-21. Attach three running boards with 3/8" x 1-3/4" bolts, nuts and lockwashers. All necessary bolts, nuts, etc. are furnished and are located in tool box.

Assemble sign #JO-123, and center light pole assembly #JO-121 if ordered.

Locate control box to suit operators convenience. Attach to post and ground plate JO-119, and fasten to ground with ground stakes #JO-38. Cover switch controls with rainproof night cover when ride is not in use.

Assemble fence #JO-39, if ordered and fasten with ground stakes. Cover with canvas night cover when ride is not in use. Connect twist lock electrical connectors between cars for noise makers, also twist lock connectors at switch panel, center post, and at sweep arms, cars, and inside of light pole.

Factory and General Office, 4219 Irving, Box 2397 Wichita, Kansas 67201

Area Code (316) 942-7411

Sales Office:

103 Ross Ave., Dallas, Texas 75202

Area Code (214) 742-3802

**CAUTION:** The wiring on this ride has been arranged for a separate connection to the lights from that of the drive motor. The ride is designed to run on 60 cycle, 220 volt current (or 110 volts). Satisfactory results might not be obtained on lines having considerable drop in voltage, especially when operating on 110 volt line, and to insure proper operation, voltage of 105 to 115 must be maintained.

Motor connections are for 220 volts when ride leaves factory. If 110 volt current must be used, motor connections must be changed to suit wiring diagram on motor nameplate. Operate the lighting and the horn only on 110 volt, 60 cycle current.

Buzzers for Jolly Caterpillar noise maker operation: If buzzers burn out, remove mounting plate and replace with buzzer of same voltage and cycle. Buzzers are located at side of each seat near Jolly face switchboards. Standard Buzzer equipment on ride is: 24 V, 60 Cycle - Connected 24 volts at transformer for 60 cycle operation. 24 V, 60 cycle - Connected 16 volts at transformer for 25 cycle operation.

Eight Volt blinker eyes and 24 volt buzzer noise makers are operated through a flasher button, (Eagle #D472, 110 volts), a 60 watt and 110 volt lamp, and a transformer with 110 volt 10 amp. fuses on input side and 24 volt 5 amp. fuses on secondary side. This equipment is accessible through a panel located behind the head of the Jolly Caterpillar.

At the factory the fluid drive sheave is given the proper amount of a premium grade of SAE 10 W oil. A change of oil is necessary every five years unless excessive slippage indicates an earlier change is necessary. Check oil level yearly. A slippage of 85 RPM between RPM of motor and the RPM of hydro-sheave is considered standard. The hydro-sheave bearings are lubricated for life.

The fluid sheave has the correct quantity of oil when it is positioned with its 2-1/2" marking at the top center position, which places the plug opening off center. Fill with the proper fluid until oil tends to run out plug opening. Then replace pipe plug. Use Gasket compound on plug threads.

#### Vertical Shaft Worm Reducer U-300:

- (a) Follow instructions on nameplate, using 600W in warm weather and 1/2 of SAE #40 and 1/2 of 600W in cold weather. Maintain proper level.
- (b) Drain and refill after first 150 hours of operation.
- (c) Use grease gun (furnished) on upper bearing fitting of reducer. Fill with Mobil MP Grease or King Graphite Product #KGP-24.
- (d) Keep breather fitting clean and open.

Use grease gun (furnished) on fitting provided on: (Fill with Mobil MP Grease or King Graphite Product #KGP-24.

- (a) Motor (Ball bearing type only)
- (b) Center post (at rotating head)

Use light machine oil on chain.

Check the "V" Belts on the drive for proper tension. These have been set correctly at the factory, but when new, adjustment should be made frequently until the initial stretch has been taken up. These are not to be too tight and need very little attention during the season. **CAUTION:** Any adjustment of the belt drive should be done with the motor. Do not change the position of the gear reducer.



MAINTAIN GREASE BETWEEN HIGH AND LOW LEVEL. USE NO. 600W GREASE IN NORMAL WEATHER, OR MIXTURE OF ONE HALF SAE NO. 40 AND ONE HALF OF NO. 600W IN COLD WEATHER. DRAIN AND REFILL AFTER FIRST 150 HOURS OF OPERATION.

CLEAN BREATHER PIPE

REINGER-LIMBELT U-300 3/8" TO 1 I.M. ARRY. (1)

OVERHAUL SHAFT

MOTOR 3 H.P. 1800 R.P.M. FRAME #215 3 PH. 1 1/4" SHAFT DIA. (1)

(OR)

MOTOR 3 H.P. 1800 R.P.M. FRAME #254U (PH. 1 3/8" SHAFT DIA. (1)

HORN EDWARDS NO. 374 110 V. 60 CYC. (1)

FLUID DRIVE-TWIN DISC 8.9 H.S.D. 1 1/4" BORE FOR 3 PH. (FR. 215) (1)

1 3/4" BORE FOR 1 PH. (224U) WITH OD-38-6.4 SHEAVE. (1)

BELTS-A SECTION SUPER BELT NO. R-46 16.4 TO 4.8 P.D. (3)

SHEAVES-15" CENTER DIST.

SHEAVE-3 GROOVE-A SECTION 4.8 P.D. 7/8" BORE (1)

3/16-1 3/32 KEYWAY (378.6.1)

BRAKE-CUTLER HAMMER TYPE 3-4-SOLENOID OPERATED (1)

MAGNETIC BRAKE 10 LBS. FT. TORQUE 1" BORE 1/4-1/8"

KEYWAY 220-3-50 OR TO SUIT CUSTOMER.

BRYANT NO. 4

BLINKER EYES

TRANSFORMER

COLE HERSEY

EAGLE FLASH

LAMP HOLDER

60 WATT. 110

REFER TO KIDDIE RIDE DRIVE INSTRUCTION SHEETS FOR MAINTENANCE INFORMATION.

JO-42 STUB SHAFT (1)

JO-3 CAR NO. 3 (1)

JO-2 CAR NO. 1

JO-4 CAR NO. 2 (1)

CANVAS CAR COVER (1)

JO-5 RUNNING BOARD CAR NO. 3 (1)

JO-4 RUNNING BOARD CAR NO. 2 (1)

JO-119 BASE PLATE FOR  
SWITCH BOX STAND JO-52 (1)  
CONTROL SWITCH BOX SP-104 (1)  
CONTROL SWITCH COVER SP-103 (1)

JO-39 FENCE PEDESTAL (1)

JO-39 FENCE (104)

TRUMBULL 150 SW SWITCH WITH  
FUSETRON PLUG FUSES.  
TRUMBULL #231 SWITCH WITH  
FUSETRON CART. FUSES.  
\*YZ-2RQ1-A2 MOMENTARY  
CONTACT SWITCH.  
HAGEN TIME SWITCH #73-04269  
AR-CONTACTOR NO. 702-COA-93.

JO-3 DETAIL SECTION (1)  
CHAIN-R.C.-100-1 1/4 PITCH 7.3 PITCHES LG. RIVETED & WITH 10  
HALE LINK & PAPER LOCK BUSHING 7-7 1/4 LG.  
13 TOOTH SPROCKET-R.C.-100-1 1/4 PITCH TYPE B 1 1/4" BORE. (1)  
1/4-1 1/8 KEYWAY.

JO-5 CAR NO. 3 (1)

TYPICAL CAR CONNE

TIME-600-14.6 PLY. COMM. & TIME GOODRICH OR EQUIV. (1)  
13 TOOTH SPROCKET-R.C.-100-1 1/4 PITCH TYPE B 1 1/4" BORE 1/2-1 1/4 KEYWAY. (1)  
JO-8 WHEEL (1)

JO-27 WHEEL (1)  
TIRE-7.00-17-  
JO-101 TRACK (1)

ABRASIVE TRACK PAINT

MCDUGAL-BUTLER NON SKID GRAY

JO-101 TRACK SECTION (12)

TOGGLE SWITCH AND BOX (1)

12 (2)

110 V. 60 CYC. (1)

5E SWITCH NO. 4622 (1) NO. 5ARG BUSS FUSE (3)

BUTTON NO. 0472 (1)

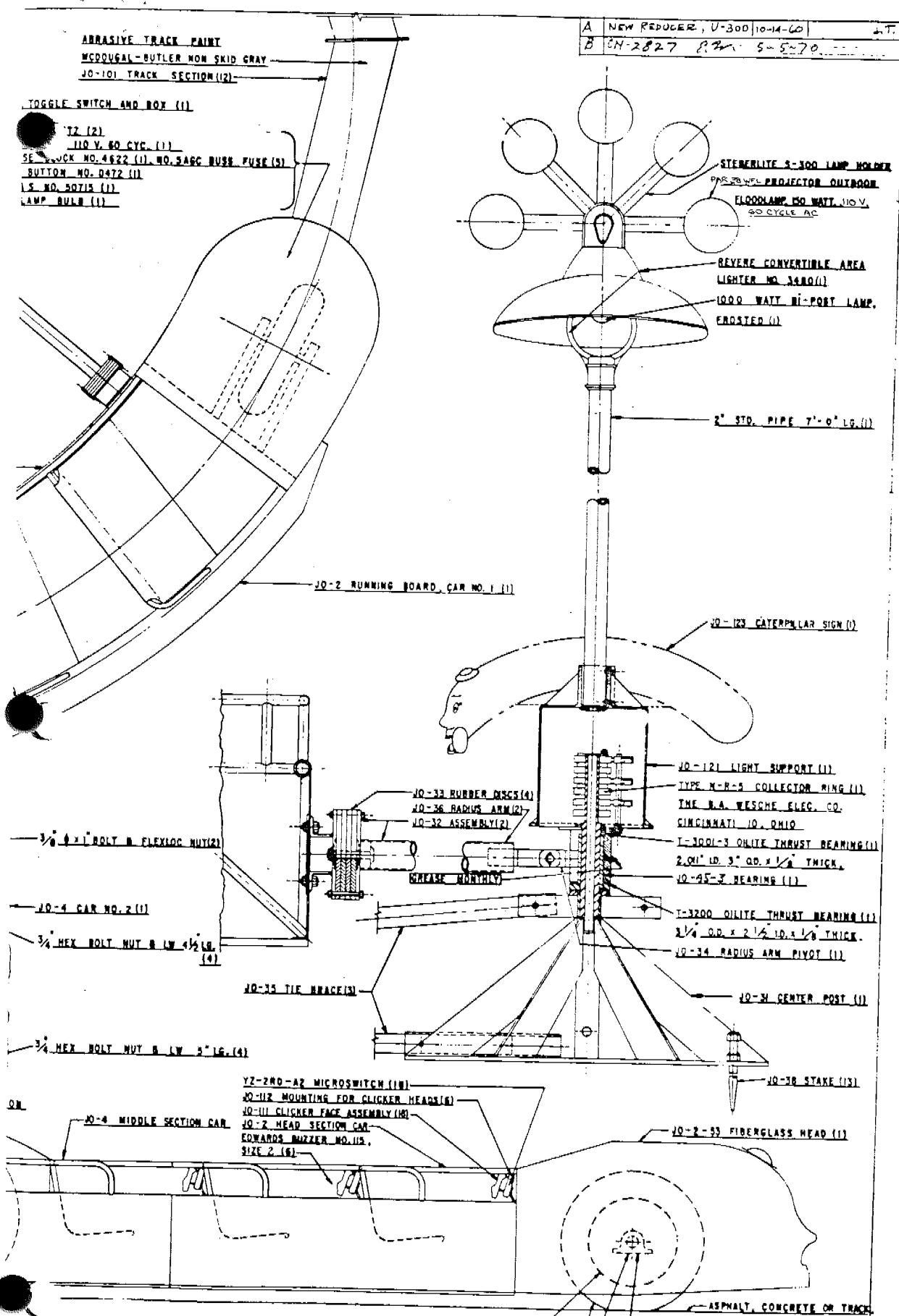
15 NO. 50715 (1)

LAMP BULB (1)

A NEW REDUCER, U-300 10-14-60

B CH-2827 P.M. 5-5-70

J.T.



STEREOLITE 5-300 LAMP HOLDER

PAR 35W. PROJECTOR OUTDOOR

FLOODLAMP 150 WATT, 110V,  
60 CYCLE AC

REVERSE CONVERTIBLE AREA  
LIGHTER NO. 3480 (1)

1000 WATT BI-PORT LAMP,  
FROSTED (1)

2" STD. PIPE 7'-0" LG. (1)

JO-123 CATERPILLAR SIGN (1)

JO-121 LIGHT SUPPORT (1)

TYPE M-R-2 COLLECTOR RING (1)

THE W.A. WESCHE ELEC. CO.

CINCINNATI 10, OHIO

T-3001-3 OILITE THRUST BEARING (1)

2.00" ID. 3" O.D. x 1/2" THICK.

JO-25-2 BEARING (1)

T-3200 OILITE THRUST BEARING (1)

2 1/4" O.D. x 2 1/4" ID. x 1/2" THICK.

JO-34 RADIUS ARM PIVOT (1)

JO-31 CENTER POST (1)

JO-30 STAKE (13)

YZ-2RD-A2 MICROSWITCH (1W)

JO-112 MOUNTING FOR CLICKER HEADS (8)

JO-111 CLICKER FACE ASSEMBLY (8)

JO-2 HEAD SECTION CAR

EDWARDS BUZZER NO. 112,

SIZE 2 (6)

JO-2-35 FIBERGLASS HEAD (1)

ASPHALT, CONCRETE OR TRACK

JO-26 WHEEL (1)

TIRE - 8.00 x 16 - 6 PLY (1)

GREASE EACH SEASON 6 MMS

ALLOW BLOCK LIMEBELT P-231,

15/16" SHAFT & (6) FOR 3 WHEELS.

WHEN ORDERING PARTS  
SPECIFY YOUR PURCHASED RIDE SERIAL NUMBER,  
PART NUMBER DESIRED, AND QUANTITY DESIRED.

SPEED OF RIDE IS 7 1/4 R.P.M.

ALLAN HERSCHWELL CO., INC.  
AMUSEMENT DEVICES 8 TOWNSHIP, N.Y.  
JOLLY CATERPILLAR  
PART NUMBERS AND  
LUBRICATION INSTRUCTIONS.  
REV. BY DATE 7-15-66 SCALE  
15-11 15-11 15-11  
15-11 15-11 15-11